

MD3300MRP 5454801 Radio: Load manager POWER

- ① The complete instruction booklets in French, Spanish, German, Nederlands, Danish / Norwegian and the device configuration booklets via the Yokis PRO App can be downloaded by scanning the following QR-Code.



1. GENERAL DESCRIPTION

The **MD3300MRP** device is designed to control electrical loads so as to prevent, in case of simultaneous switching on of several devices, an overload that may cause the maximum electrical energy consumption allowed by the supplier to be exceeded and consequently the mains power supply to be disconnected. For proper operation of the device it is necessary to:

- assign one or more MTR2000ERP(X) or MTR2000MRP(X) radio receiver relays to the MD3300MRP device (up to 7 relays directly connected or more than 7 using the RADIO BUS);
 - make the assignment between the receiver modules and the device channels (max 8 channels, each with a different priority: channel 1 = priority 1 = highest priority), so as to indicate to the MD3300MRP load manager which receiver modules are to be piloted according to the priorities.
- ① It is possible to assign more than one receiver module to each channel in order to disconnect several loads at the same time. This also allows simultaneous control of phase and neutral on the same load, where this is deemed necessary.

If the absorbed power exceeds the set threshold continuously for the pre-alarm time (Ton), the MD3300MRP load manager provides the loads disconnection (receivers), starting from the lowest priority, as long as the value of the absorbed power does not result lower than the activation threshold. Once the alarm reset time (Toff) has elapsed, the device provides the loads connection (receivers) in reverse order. The load manager and the actuators communicate exclusively via radio.

RADIO RANGE

POWER Range:

- Inside 100 m² apartments with perpendicular crossing of main wall or ceiling.
 - 250m in open range.
- ① Range may be reduced by presence of metallic elements, crossing of walls or partitions.

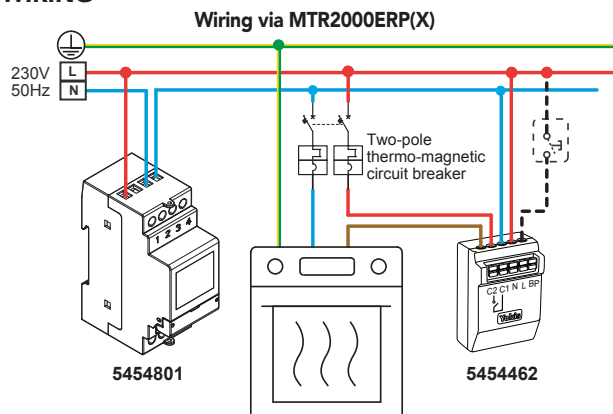
2. INSTALLATION

Precautions for the installer

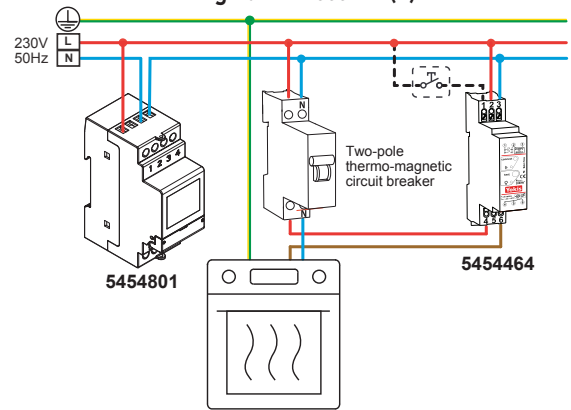
- The device must only be installed by qualified personnel in a closed and adequately protected electrical panel, in accordance with national installation standards.
- Before performing the installation operations, check that the devices and conductors are not live.
- In order to comply with the safety regulations, the device must be connected to an electrical line protected upstream by a magnetothermic switch (curve C) with a current suitable for the load.
- Do not power on or connect the device if any part of it is damaged.
- After installation, inaccessibility to the connection terminals without appropriate tools must be guaranteed.
- The device can be used in environments with category of measurement III and pollution degree 2.

For proper operation, the MD3300MRP load manager must measure the same current as the general energy meter. For this reason the ideal position for the device connection is immediately downstream of the general switch.

3. WIRING



Wiring via MTR2000MRP(X)



- ① Wires with cross-section area of 0.5 mm² or larger must comply with IEC 60332-1-2; wires with cross section area smaller than 0.5 mm² must comply with IEC 60332-2-2.

It is necessary to wire and power the MTR2000ERP(X) or MTR2000MRP(X) receiver before the assignment with the MD3300MRP load manager.

- ① Always make sure that the MTR module is configured with the default values.

The MTR used for load control must manage electrical sockets. In this case, in rest conditions, the MD3300MRP load control device periodically carries out an automatic check of all the MTR modules, in order to restart them in a time that can vary between 5 minutes and 40 minutes “.

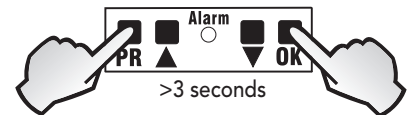
4. FIRMWARE RELEASE

Press and hold the keys **OK** and **▼** for more than 3 seconds to display the firmware release of the device.

5. RESET TO FACTORY SETTINGS

If you want to delete all the settings made and restore the factory values, press the keys **PR** and **OK** simultaneously for more than 3 seconds. The display will show “RESET”. Factory values:

- Setpoint: 3.3 kW
- Ton: 60 seconds
- Toff: 120 seconds



CAUTION!: Resetting to the factory settings does not delete the radio assignments made on the MD3300MRP device. To delete radio assignments, see in detail chapter “REMOVING ALL RADIO ASSIGNMENTS”.

6. TECHNICAL SPECIFICATIONS

Power supply: 230V~ (+10% -15%) - 50 Hz
 Maximum own consumption: 4 VA
 Direct current connection until 32A
 Settable power threshold range: 0.8 ÷ 7 kW
 Pre-alarm time range Ton: 10 ÷ 9999 seconds
 Disconnection time range Toff: 10 ÷ 9999 seconds
 Blocks for cables with maximum section of 6 mm²
 Radio frequency band: 2400 - 2480 MHz
 Maximum radio power transmitted: 10mW
 Operating temperature: -10°C ÷ +45°C
 Operating humidity: 10% ÷ 90% non condensing
 Storage temperature: -10°C ÷ +65°C
 Container: 2 DIN modules
 Overvoltage category: II
 Operating altitude: below 2000 m (from 0 to 6560 ft)
 Protection degree: IP20 / IP40 (on the front panel)
 Indoor usage only, non-wet location
 Insulation: reinforced between accessible parts (front panel) and all other terminals
 Dimensions (H x L x D): 87,5 x 35,6 x 65 mm

7. KEY TO SYMBOLS

Symbol	Description
~	Alternating input voltage
⚠	See the installation manual of the device

8. SIMPLIFIED EU DECLARATION OF CONFORMITY

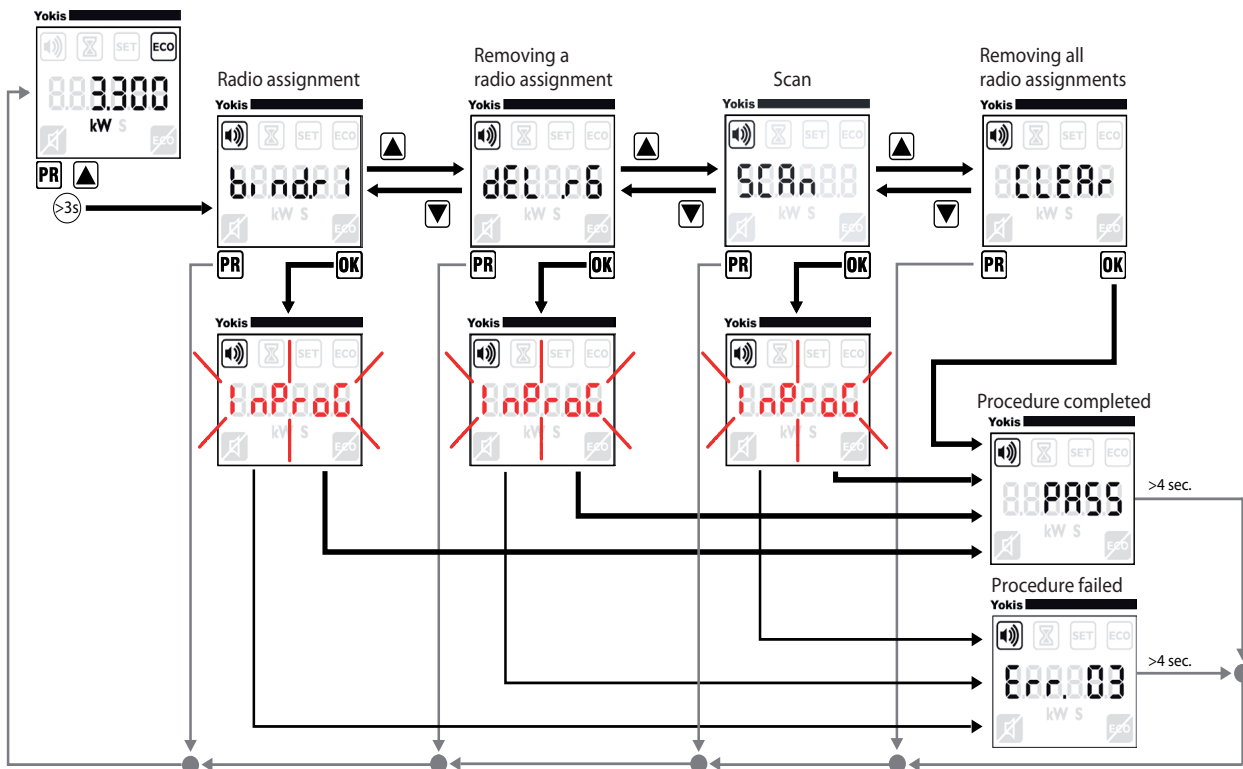
Hereby, FDI Matelec SA., declares that the radio equipment type: **MD3300MRP load manager (code 5454801)** is in compliance with Directive 2014/53/EU. The full text of the EU declaration of conformity is available at the following internet address: www.Yokis.com



Directive 2012/19/EU of the European Parliament and of the Council of 4 July 2012 on waste electrical and electronic equipment (WEEE)

The symbol of the crossed-out wheeled bin on the product or on its packaging indicates that this product must not be disposed of with your other household waste. Instead, it is your responsibility to dispose of your waste equipment by handing it over to a designated collection point for the recycling of waste electrical and electronic equipment. The separate collection and recycling of your waste equipment at the time of disposal will help to conserve natural resources and ensure that it is recycled in a manner that protects human health and the environment. For more information about where you can drop off your waste equipment for recycling, please contact your local city office, your household waste disposal service or the shop where you purchased the product.

9. RADIO CONFIGURATION MENU



RADIO ASSIGNMENT BETWEEN AN MTR RECEIVER MODULE AND THE MD3300MRP LOAD MANAGER

For correct operation, it is essential to configure a radio assignment between the MD3300MRP load manager and the MTR2000ERP(X) or MTR2000MRP(X) radio receiver relays. The MD3300MRP device is able to manage up to 7 receiver modules directly connected. If you wish to manage more than 7 modules, it is necessary to create a radio bus to allow communication between the MD3300MRP device and the subsequent modules.

❗ **Only one MD3300MRP device can be configured on each system.**

► On the MD3300MRP device, access the RADIO configuration menu by simultaneously pressing keys **PR** and **▲** (for approx. 3 seconds) until the display shows "bind.r1".

❗ **You can cancel the assignment operation by pressing **PR** key.**

► Press **OK** key on the device to perform radio assignment.

► While "InProG" is flashing (for 30 seconds), press briefly with a sharp, properly insulated tool into the "Connect" hole on the receiver module.

► The MD3300MRP device will briefly display the message "PASS" if the assignment has been successful. The receiver module is now correctly assigned to the MD3300MRP device.

► If the device displays the message "Err. 03" the assignment has not been successful. Repeat the operation and make sure to press into the "Connect" hole on the receiver module within the 30 seconds in which the MD3300MRP load manager displays the message "InProG".

❗ **In some cases, if the receiver is out of radio range, it is possible that the load manager is unable to communicate with the receiver and displays the message "Err. 03". In this case, refer to paragraph "Extending the range".**

► It is necessary to repeat the entire assignment procedure for each receiver module you wish to assign directly to the MD3300MRP device.

REMOVING ONE SINGLE RADIO ASSIGNMENT

It is possible to remove an assignment between an MTR receiver module and the MD3300MRP load manager.

► On the MD3300MRP device, access the RADIO configuration menu by simultaneously pressing keys **PR** and **▲** (for approx. 3 seconds) until the display shows "bind.r1".

► Press the arrow key **▲** or **▼** until "del.r6" is displayed.

❗ **You can cancel the assignment operation by pressing **PR** key.**

► Press **OK** to remove the assignment.

► While "InProG" is flashing (for 30 seconds), press briefly with a sharp, properly insulated tool into the "Connect" hole on the receiver module.

► The MD3300MRP load manager will briefly display the message "PASS" if the receiver module assignment removal has been successful.

► If the device displays the message "Err. 03" the assignment removal has not been successful. Repeat the operation and make sure to press into the "Connect" hole on the receiver module within the 30 seconds in which the MD3300MRP load manager displays the message "InProG".

DEVICE SCAN FOR YOKIS PRO APP

The scanning operation allows the MD3300MRP device to be detected by the Yokis Pro App in order to subsequently carry out the assignment to the channels and the parameter configuration (Paragraphs 10 and 11) directly from the App.

► On the MD3300MRP device, access the RADIO configuration menu by simultaneously pressing keys **PR** and **▲** (for approx. 3 seconds) until the display shows "bind.r1".

► Press the arrow key **▲** or **▼** until "SCAN" is displayed.

❗ **You can cancel the scan by pressing **PR** key.**

► Press the key **OK** to start the detection.

► While "InProG" is flashing (for 30 seconds), start the device search on the Yokis Pro App and select it.

► The MD3300MRP load manager briefly displays the message "PASS" if the device has been detected and selected by the Yokis Pro App.

► If the device displays the message "Err. 03" the detection has not been successful. Repeat the operation and make sure to start the device search on the Yokis Pro App within the 30 seconds in which the MD3300MRP load manager displays the message "InProG".

❗ **For more details on channel assignment and configuration of the MD3300MRP device through the Yokis Pro App, scan the QR Code at the beginning of the booklet to download the booklet.**

REMOVING ALL RADIO ASSIGNMENTS

It is possible to remove all assignments between the various receiver modules and the MD3300MRP load manager.

► On the MD3300MRP load manager, access the RADIO communication menu by simultaneously pressing keys **PR** and **▲** (for approx. 3 seconds) until the display shows "bind.r1".

► Press the arrow key **▲** until "CLEAR" is displayed.

► Press the key **OK** to delete all assignments.

► The MD3300MRP device will briefly display the message "PASS". All assignments with receiver modules have been removed.

EXTENDING THE RANGE

All YOKIS radio receivers also work as signal repeaters. The addition of one or more modules allows extending the radio range by creating a Radio Bus between the various modules on the system.

1) Creating the Radio Bus

► **Press once the Connect button of A module** (the LED of A module starts flashing), then **press once the Connect button of B module** (connection between A and B is created and the 2 modules stop flashing).

► The two buttons must be pressured within a maximum of **30** seconds.

► Perform the same operation between B and C modules and so on with the other modules.

2) Assigning the receiver module to the MD3300MRP load manager

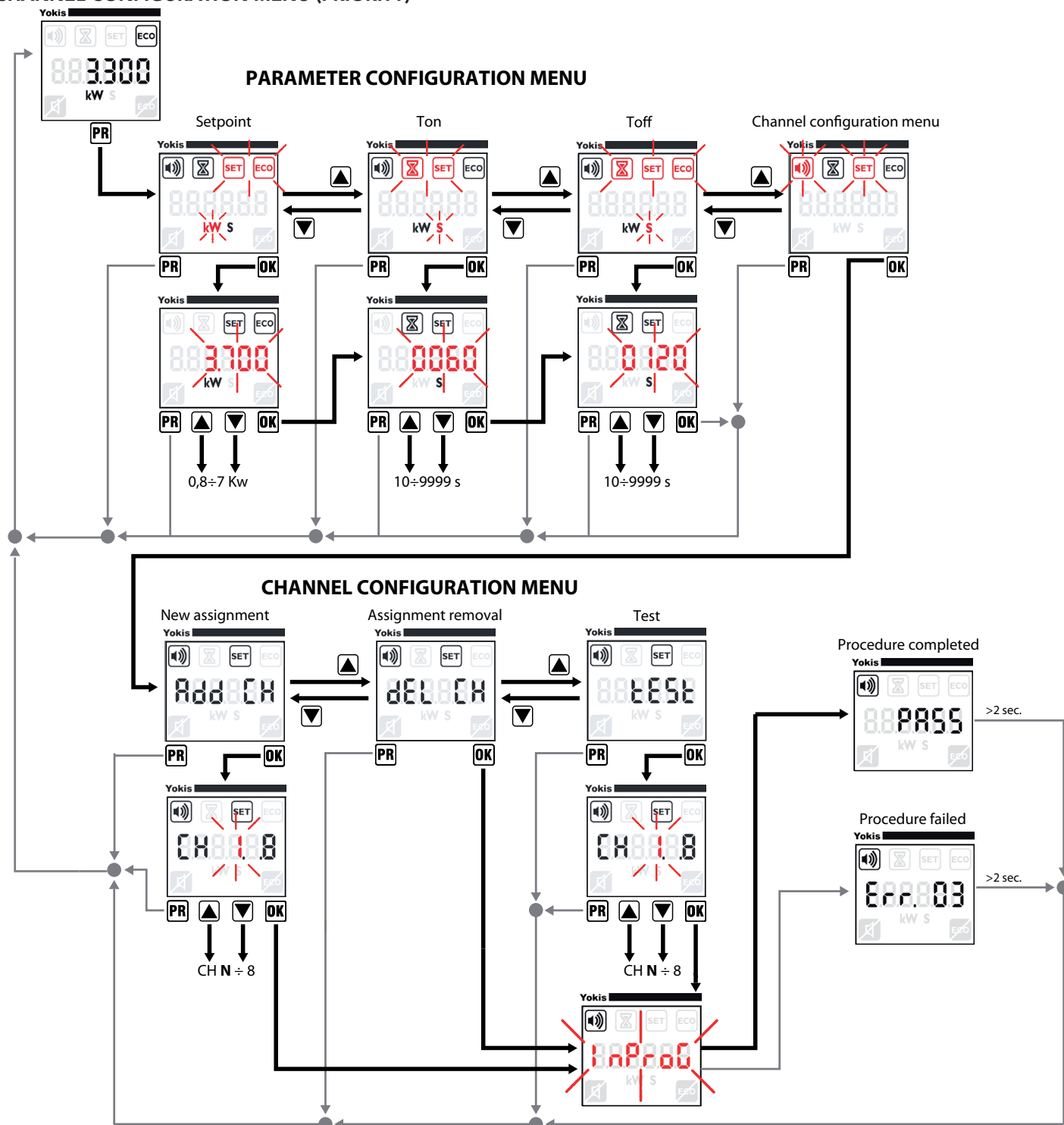
- When the Radio Bus has been created, assign the MTR receiver module which pilots the load to the MD3300MRP load manager following the procedure described in paragraph "Radio assignment between an MTR receiver module and the MD3300MRP load manager".

After performing the RADIO assignment between the receiver modules

and the MD3300MRP load manager, it is necessary to make the assignment between the receiver modules and the device channels, so as to indicate to the MD3300MRP load manager which receiver modules are to be piloted according to the priorities.

- ① The MD3300MRP device is able to manage up to 8 channels, each with a different priority: channel 1 = priority 1 = highest priority.

10. CHANNEL CONFIGURATION MENU (PRIORITY)



ASSIGNING AN MTR RECEIVER MODULE TO A CHANNEL

- On the MD3300MRP load manager, access the PARAMETER configuration menu by pressing the key **PR**. The icons **SET** / **ECO** and "kW" will start flashing.
- Press the arrow key **▲** or **▼** until the icons **SET** and **🔊** flash on the display. Press the **OK** key to enter the CHANNEL configuration menu.
- The device display shows "Add CH". Press the **OK** key to assign the receiver module to the channel.
- The display shows "CH N. .8" where the parameter "N" indicates the channel number (from 1 to 8) where the assignment to the receiver module is made, the parameter 8 indicates the maximum number of channels.
- ① It is recommended to perform the assignment starting with the channels with the highest priority.

- Press the arrow keys **▲** or **▼** to select the channel "N" on which you want to perform the assignment. Press the key **OK** to confirm.
- While "InProG" is flashing for 30 seconds, press briefly with a sharp, properly insulated tool into the "Connect" hole on the receiver module.
- The MD3300MRP device will briefly display the message "PASS" if the assignment of the channel to the receiver module has been successful.
- If the device displays the message "Err. 03" the assignment has not been successful. Repeat the operation and make sure to press into the "Connect" hole on the receiver module within the 30 seconds in which the MD3300MRP load manager displays the message "InProG".
- It is necessary to repeat the procedure for each receiver module you wish to assign to a channel of the MD3300MRP device.
- ① It is possible to assign more than one receiver module to each channel. In this case, if the absorption threshold is exceeded, there will be two or more loads disconnecting at the same time.

REMOVING AN ASSIGNMENT BETWEEN AN MTR RECEIVER MODULE AND A CHANNEL

It is possible to remove an assignment between an MTR receiver module and a channel of the MD3300MRP device.

- ▶ On the MD3300MRP device, access the PARAMETER configuration menu by pressing the key **PR**. The icons **SET** / **ECO** and "kW" will start flashing.
- ▶ Press the arrow key **▲** or **▼** until the icons **SET** and **🔊** flash. Press the key **OK** to enter the CHANNEL configuration menu.
- ▶ The device display shows "Add CH". Press the arrow keys **▲** or **▼** until "dEL CH" is displayed, press the key **OK** to remove an assignment.
- ▶ "InProG" is displayed.
- ▶ While "InProG" is flashing for 30 seconds, press briefly with a sharp, properly insulated tool into the "Connect" hole on the receiver module.
- ▶ The MD3300MRP device will briefly display the message "PASS" if the assignment removal between the channel and the receiver module has been successful.
- ▶ If the device displays the message "Err. 03" the assignment removal has not been successful. Repeat the operation and make sure to press into the "Connect" hole on the receiver module within the 30 seconds in which the MD3300MRP load manager displays the message "InProG".
- ▶ It is necessary to repeat the entire procedure for each assignment you wish to remove.

TEST FUNCTION

The test function is used to check that the assignment between the receiver module and the MD3300MRP load manager (i.e. the relevant channel) is working correctly. The test involves a switching on and off sequence (one every 10 seconds) of the receiver module.

- ▶ On the MD3300MRP load manager, access the PARAMETER configuration menu by pressing the key **PR**. The icons **SET** / **ECO** and "kW" will start flashing.
- ▶ Press the arrow key **▲** or **▼** until the icons **SET** and **🔊** flash on the display. Press the key **OK** to enter the CHANNEL configuration menu.
- ▶ The device display shows "Add CH". Press the arrow keys **▲** or **▼** until "test" is displayed, press the key **OK** to test a channel.
- ▶ The display shows "CH N. 8" where the parameter "N" indicates the channel number (from 1 to 8) where the test is performed, the parameter 8 indicates the maximum number of channels.
- ▶ Press the arrow keys **▲** or **▼** to select the channel "N" on which you want to perform the test. Press **OK** to confirm.
- ▶ Every time the command is transmitted, the icon **🔊** flashes for a few seconds while the alarm LED, located between the keys **▲** or **▼**, shows the transmission status:
LED on = actuation ON
LED off = actuation OFF

❗ It is possible to interrupt the test by pressing **PR**.

- ▶ The MD3300MRP device briefly displays the message "PASS" at the end of the test.

11. OPERATING PARAMETER CONFIGURATION MENU

The following operating parameters can be configured through the parameter configuration menu:

- Setpoint (kW)
- Ton (seconds)
- Toff (seconds)

❗ When a parameter has been configured, the device automatically switches to the next parameter configuration. To exit the parameter configuration menu, simply press the **PR** key.

❗ When configuring parameters, long presses of the arrow key **▲** or **▼** allows changing the values more quickly.

SETPOINT (kW)

Represents the activation threshold that is to say the maximum value of accepted consumption. Over this value the MD3300MRP device provides for the disconnection of the lowest priority load that is connected in that moment.

- ▶ On the MD3300MRP device, access the PARAMETER configuration menu by pressing the **PR** key. The icons **SET** / **ECO** and "kW" will start flashing. Press the key **OK** for Setpoint configuration.
- ▶ On the display, the icons **SET** / **ECO** will be steady on and the Setpoint parameter value will start flashing.

- ▶ Press the arrow keys **▲** or **▼** to set the Setpoint parameter. The parameter value can be set in an interval from **0.8 kW** to **7 kW**. Press the **OK** key to confirm and go to the next parameter configuration.

Ton (seconds)

Represents the pre-alarm time, that is to say how long the power must be higher than the setpoint before the load is actually disconnected.

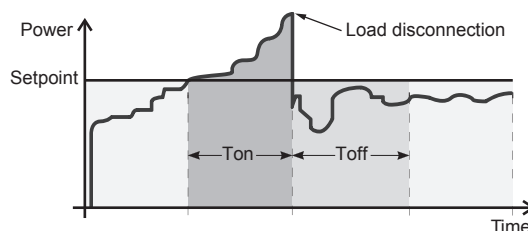
- ▶ On the display, the icons **🕒** / **SET** will be steady on and the prealarm time value (Ton) will start flashing.
- ▶ Press the arrow keys **▲** or **▼** to set the prealarm time (Ton). The parameter value can be set in an interval from **10 seconds** to **9999 seconds**. Press the **OK** key to confirm and go to the next parameter configuration.

Toff (seconds)

Represents the recovery time, that is to say after how long the most priority load, disconnected in that moment, is reconnected.

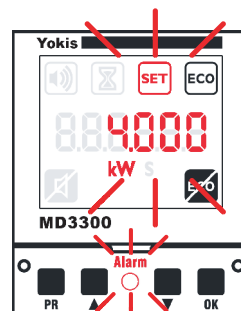
❗ The load is connected only if the absorbed power is lower than the set power threshold.

- ▶ On the display, the icons **🕒** / **SET** / **ECO** will be steady on and the alarm reset time value (Toff) will start flashing.
- ▶ Press the arrow keys **▲** or **▼** to set the alarm reset time (Toff). The parameter value can be set in an interval from **10 seconds** to **9999 seconds**. Press the **OK** key to confirm and exit the configuration menu.



12. ACTIVATION THRESHOLD EXCEEDED

If the absorbed power exceeds the set activation threshold (Setpoint), the icon **SET**, the measured value and the red alarm LED will start flashing on the device. If the absorbed power remains greater than the set activation threshold (Setpoint) for a time longer than the time set in the prealarm parameter (Ton), the MD3300MRP device disconnects the loads (one every 5 seconds), starting from that with lowest priority (channel 1 = priority 1 = highest priority) until the absorbed power falls below the activation threshold (Setpoint). Then the device provides the loads connection (one every 5 seconds) in reverse order, when the alarm reset time (Toff) has elapsed.



❗ The transmission of commands to radio receivers is shown by the lighting of the icon **🔊** on the device display.

13. ECO OPERATION

By pressing for a long time (3 seconds) the key **OK** you can disable the control of the control unit MD3300MRP so as to force all loads to remain active even if the absorbed power exceeds the set threshold (Setpoint).

This condition is indicated by the symbol **ECO** switch on.

Upon activation, the loads that are disconnected are activated (in sequence from the most priority load) every 5 seconds.

To disable the ECO function, press and hold the **OK** key until the **ECO** icon turns off.

MADE IN FRANCE